BookletChart™

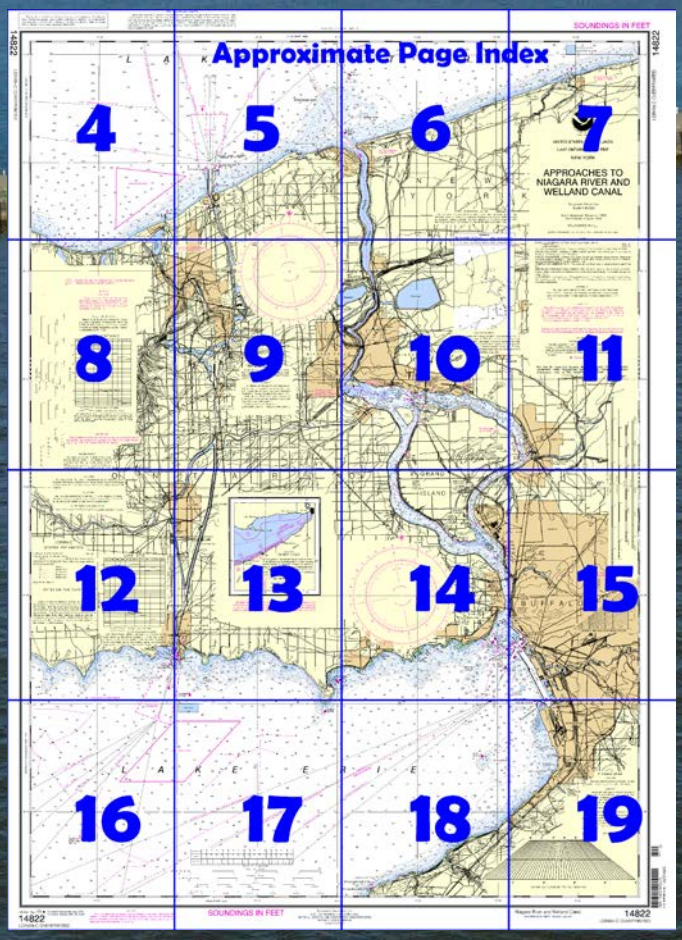
Approaches to Niagara River and Welland Canal

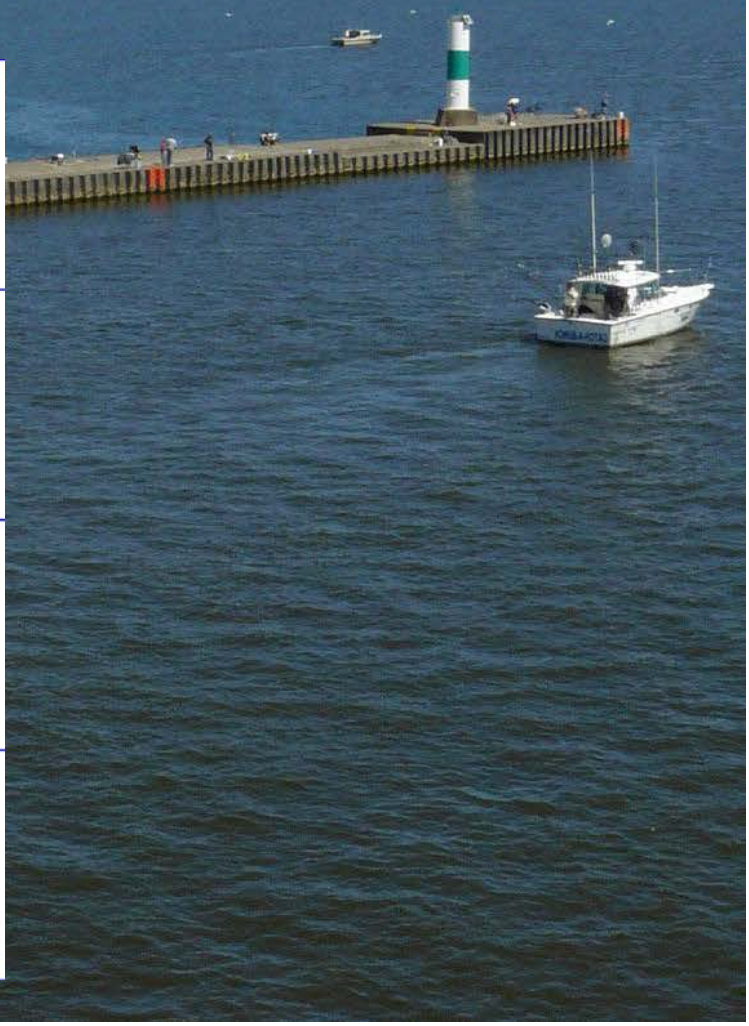
NOAA Chart 14822

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker





Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14822

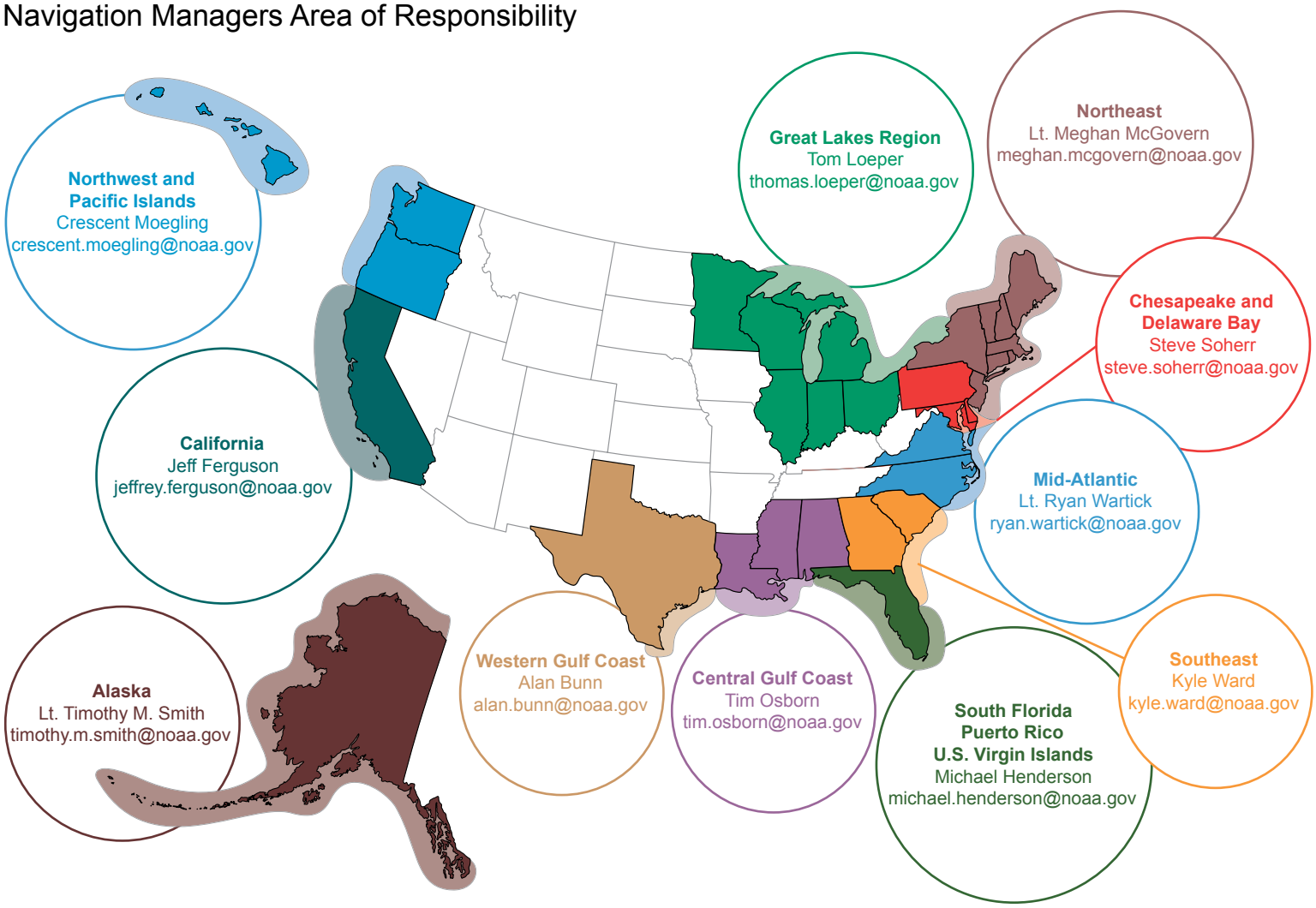
(Selected Excerpts from Coast Pilot)
At its E end, Lake Erie becomes comparatively narrow and has its outlet in the Niagara River. From the head of the river, it is about 20 miles to the falls and rapids of **American Falls** and **Horseshoe Falls**. About 5 miles below the head, the river is divided into two channels by **Strawberry Island** and **Grand Island**. **Tonawanda Channel** and **Niagara River Channel**, the U.S. channels, lead to the E of these islands, and **Chippawa Channel**, the Canadian channel, leads to the W of these islands. At the lower end of Grand Island, the channels rejoin and lead for about 3.5 miles to the falls.

The **International boundary** between the United States and Canada follows a general middle of the river course in the upper Niagara River from the head of the river downstream to the head of Grand Island where the river forks around the island. The boundary then follows Chippawa Channel and is generally less than 1,000 feet off the W shore of Grand Island until Chippawa Channel and Niagara River Channel join at the NW end of Grand Island. The boundary again follows a general middle of the river course around the S side of **Goat Island** and over Niagara Falls.
Channels.–Black Rock Canal is the recommended route from Lake Erie to facilities in the Niagara River below **Squaw Island**. The channel formerly dredged in the open river W of Bird Island and Squaw Island has shoaled to depths of 10 feet or less. The bottom in this reach is generally rocky, and the currents are strong and variable. Great care should be exercised in navigating this section of the river.
Black Rock Canal provides a safe passage for vessels around the rapids and shoals in the head of the Niagara River.
From Black Rock Lock at the lower end of Squaw Island, the dredged channel extends to a point about 0.7 mile below Pirates Island, off the SE side of Grand Island, thence through the deep water of Tonawanda Channel. W of Tonawanda Island, the dredged channel continues to a turning basin on the N side of **Tonawanda Island** at North Tonawanda.
Black Rock Lock connects the canal with the river near the foot of Squaw Island. The lock has a usable length of 625 feet with a clear width of 68 feet and a depth of 21 feet over the sills. The lock has an average lift of 5.2 feet.
Caution.–The canal generally has a slight current downstream. During rapidly rising or high water in Lake Erie, there is a strong crosscurrent at the S end of Bird Island Pier.
Wilson Harbor is in the mouth of **East Branch Twelvemile Creek,** about 12 miles east of the mouth of the Niagara River. The widened mouth of the creek forms **Tuscarora Bay,** which is about 2 feet deep in its natural depth and provides good anchorage for shallow-draft vessels.
Niagara River Below Niagara Falls.–The Niagara River flows from the northeast end of Lake Erie and enters Lake Ontario about 36 miles from its west end. The Lake Ontario entrance to the river is between two land points occupied by **Fort Niagara, NY,** on the E, and **Fort Mississauga, ON**, on the west. The **International boundary** between the United States and Canada generally follows a middle of the river course through the lower Niagara River.
The Niagara River, with its great volume of water and a current of about 2.2 knots, deposits considerable sediment in Lake Ontario and forms extensive shoals for a radius of about 3 miles off the mouth of the river. A bank with least depths of 5 feet extends about 0.8 mile off the east side of the entrance and is marked on its northwest side by a lighted bell buoy. **Rumsey Shoal,** with depths of 17 feet, is an unmarked detached shoal about 1.5 miles north of Fort Niagara. **Niagara Bar** extends from shore about 2 miles west of the river mouth northeast to a point about 3 miles north of the river mouth. The north part of the shoal has depths of 12 and 13 feet, but depths of 8 feet are found to about 1.5 miles offshore northwest of the river mouth.
The entrance to the Niagara River is marked by lighted buoys, a **149°30'** lighted range, and lights at Fort Niagara and Fort Mississauga. **Fort Niagara Light** (43°15.7'N., 79°03.8'W.), 80 feet above the water, is shown from a tower with a white and green diamond-shaped daymark on the east side of the river at the mouth.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Cleveland	Commander 9th CG District Cleveland, OH	(216) 902-6117

Navigation Managers Area of Responsibility

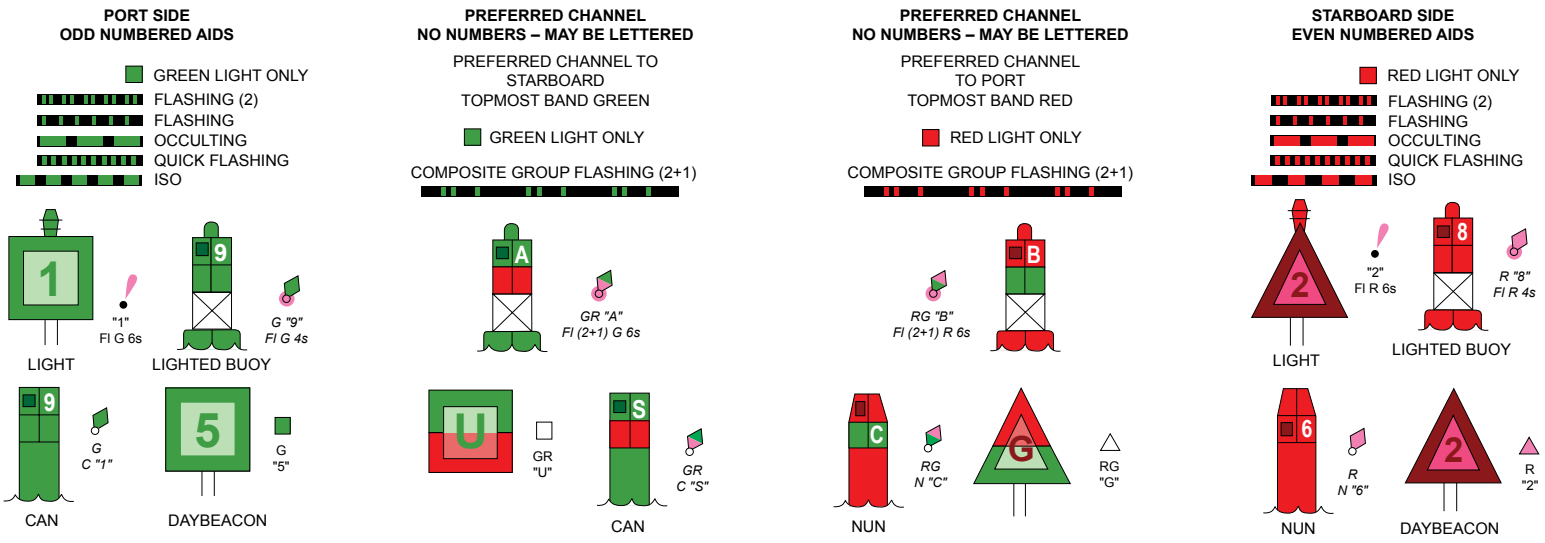


NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit *nauticalcharts.noaa.gov/service/navmanagers*

To make suggestions or ask questions online, go to *nauticalcharts.noaa.gov/inquiry*.
To report a chart discrepancy, please use *ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx*.

Lateral System As Seen Entering From Seaward

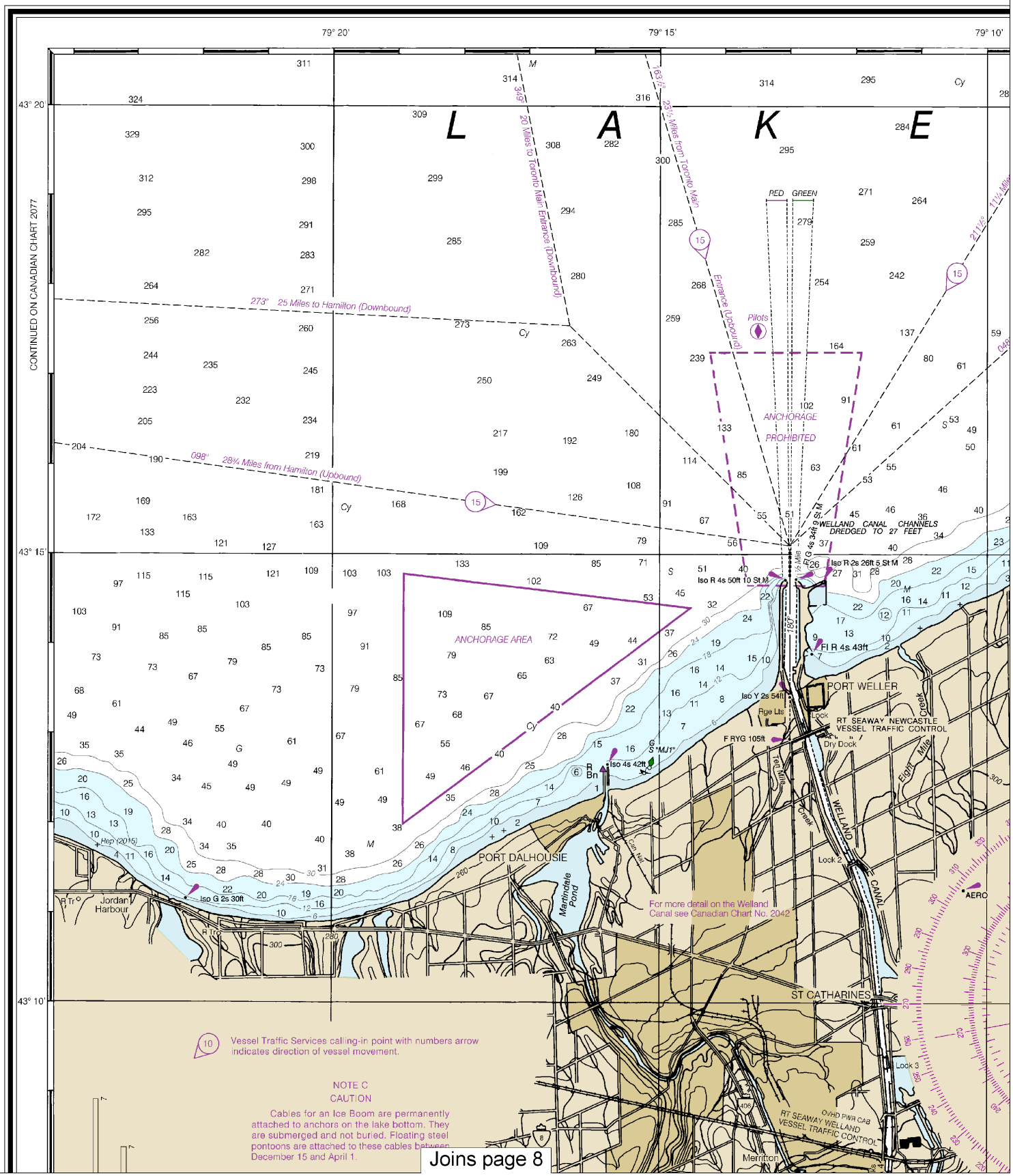
on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at *http://www.navcen.uscg.gov*

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

14822



Joins page 8

4

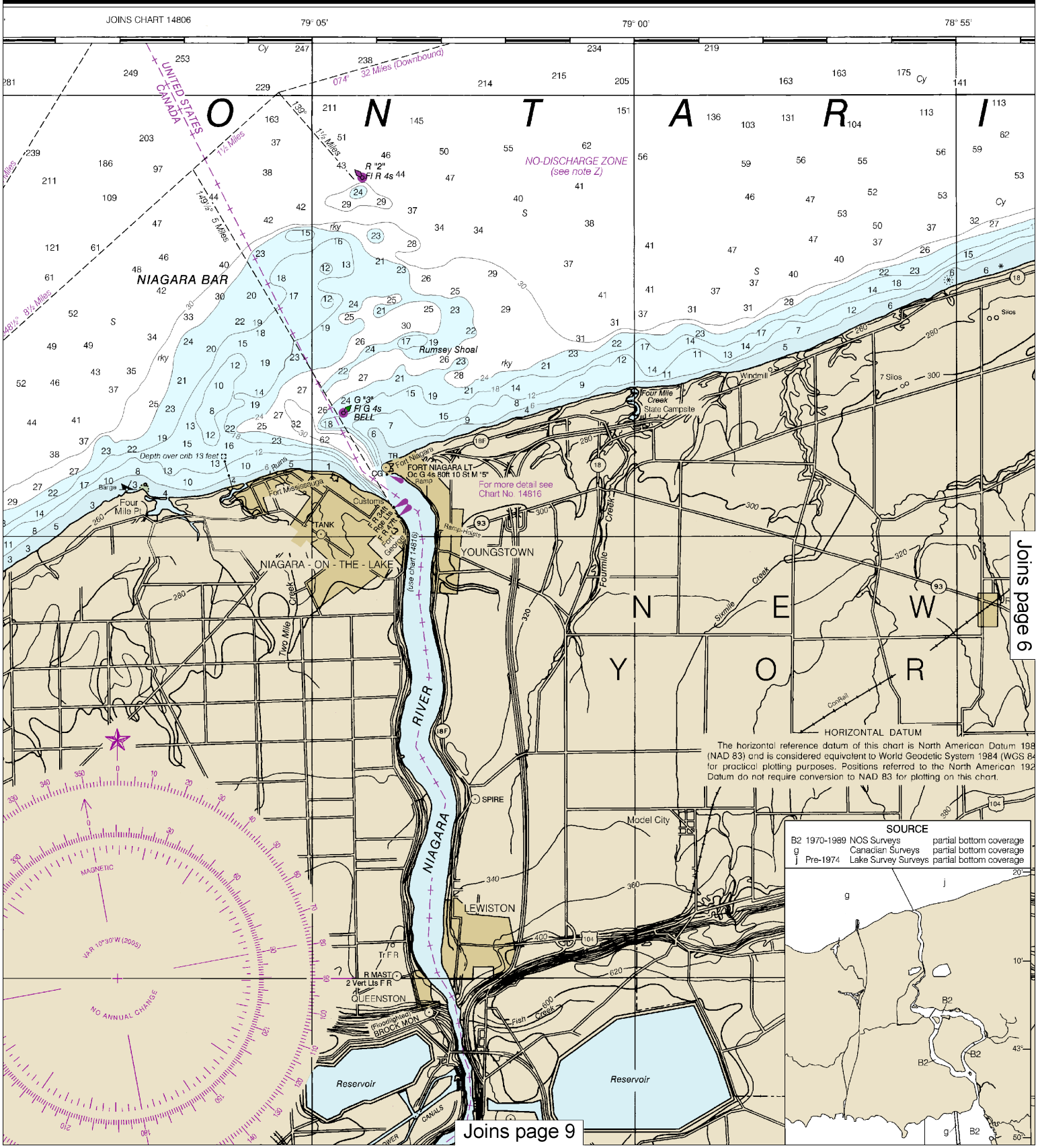
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles: 1 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

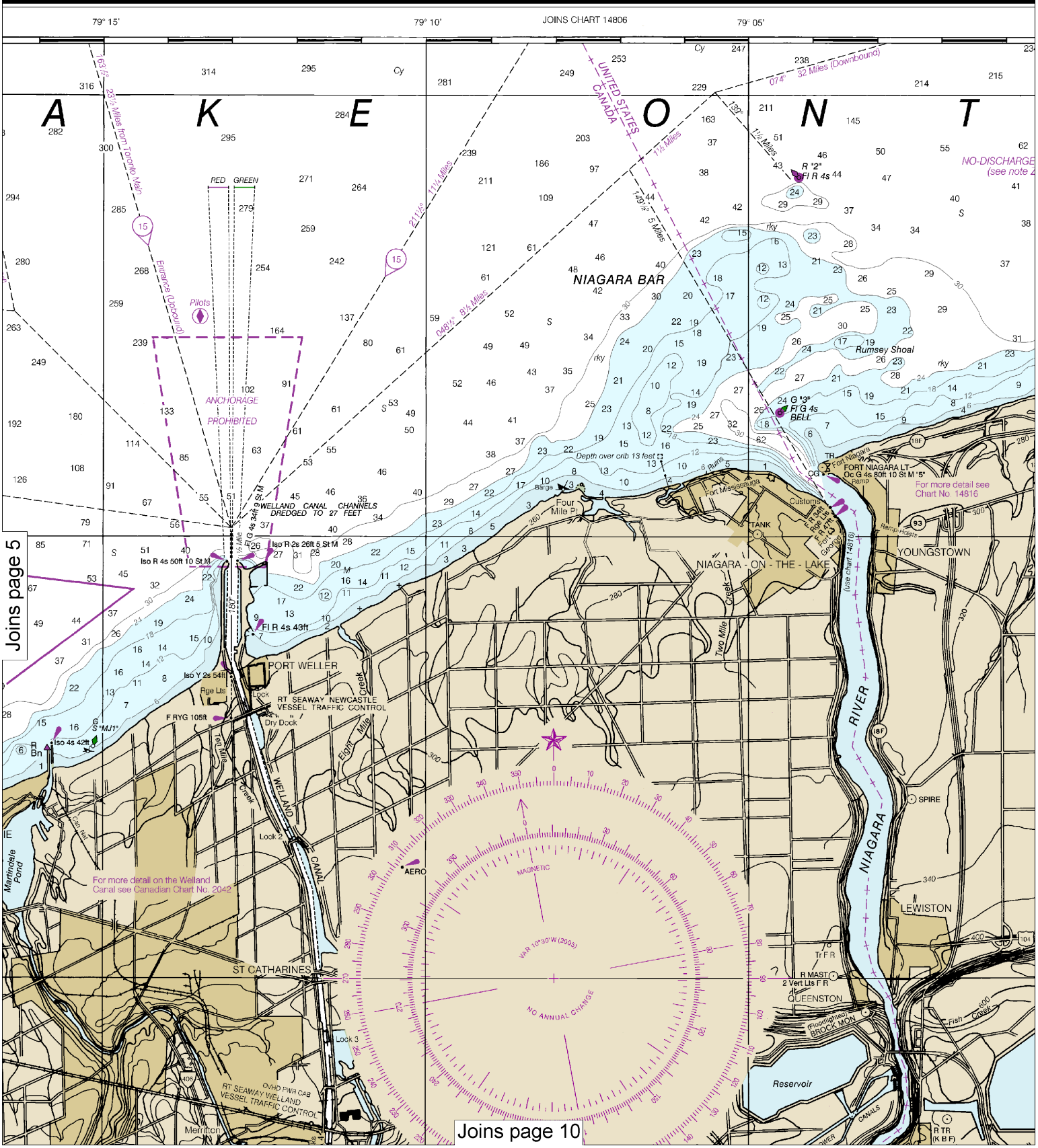
See Note on page 5.



Joins page 6

Joins page 9

This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:106666. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.



Joins page 5

Joins page 10

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles

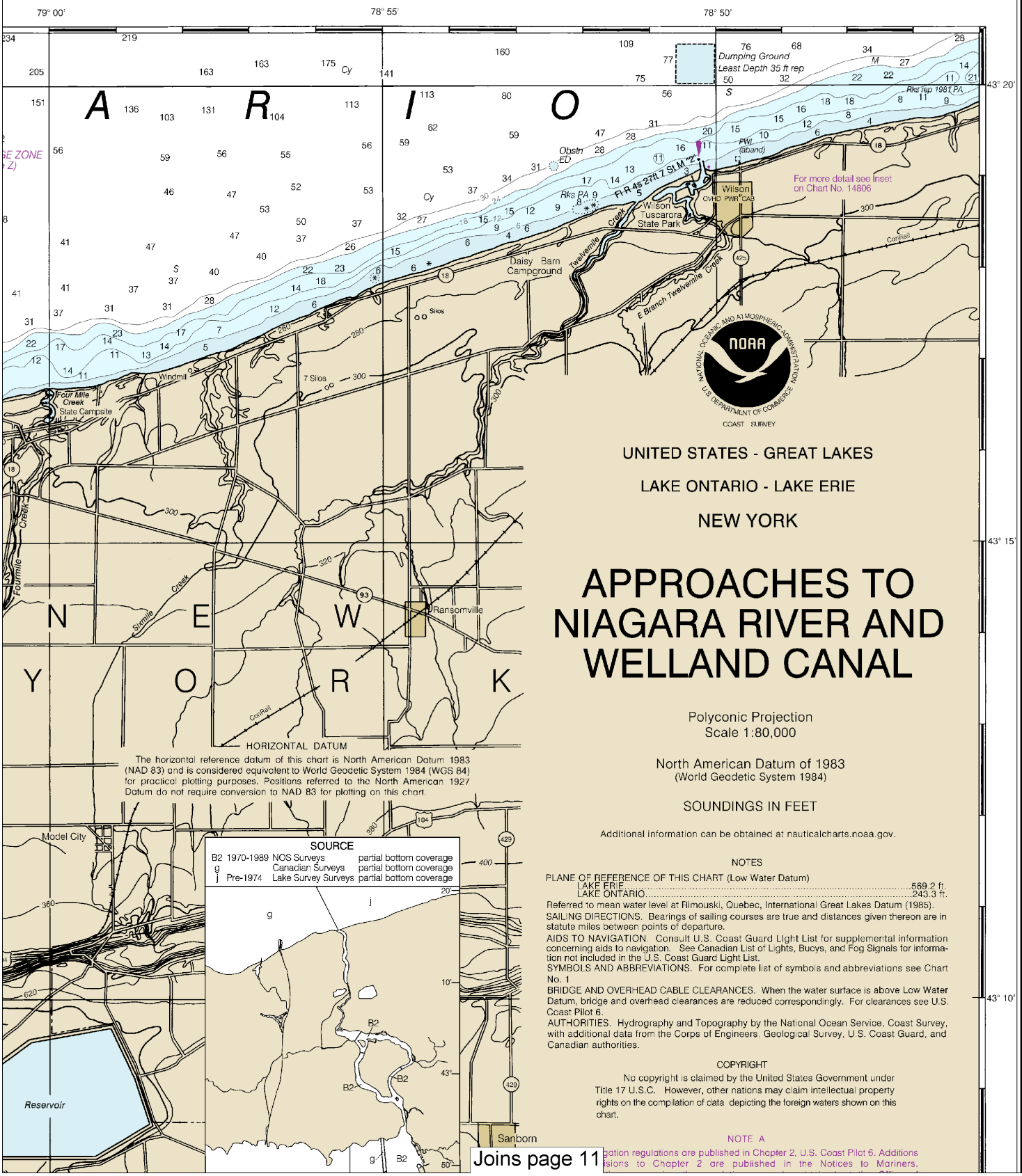
1 0 1 2 3 4 5 6 7

Yards

1000 0 2000 4000 6000 8000 10000

See Note on page 5.

14822



UNITED STATES - GREAT LAKES

LAKE ONTARIO - LAKE ERIE

NEW YORK

APPROACHES TO NIAGARA RIVER AND WELLAND CANAL

Polyconic Projection
Scale 1:80,000

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

Additional information can be obtained at nauticalcharts.noaa.gov.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum 1983 (NAD 83) and is considered equivalent to World Geodetic System 1984 (WGS 84) for practical plotting purposes. Positions referred to the North American 1927 Datum do not require conversion to NAD 83 for plotting on this chart.

SOURCE

B2	1970-1989	NOS Surveys	partial bottom coverage
g		Canadian Surveys	partial bottom coverage
j	Pre-1974	Lake Survey Surveys	partial bottom coverage

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum)
LAKE ERIE.....569.2 ft.
LAKE ONTARIO.....243.3 ft.

Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys, and Fog Signals for information not included in the U.S. Coast Guard Light List.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1

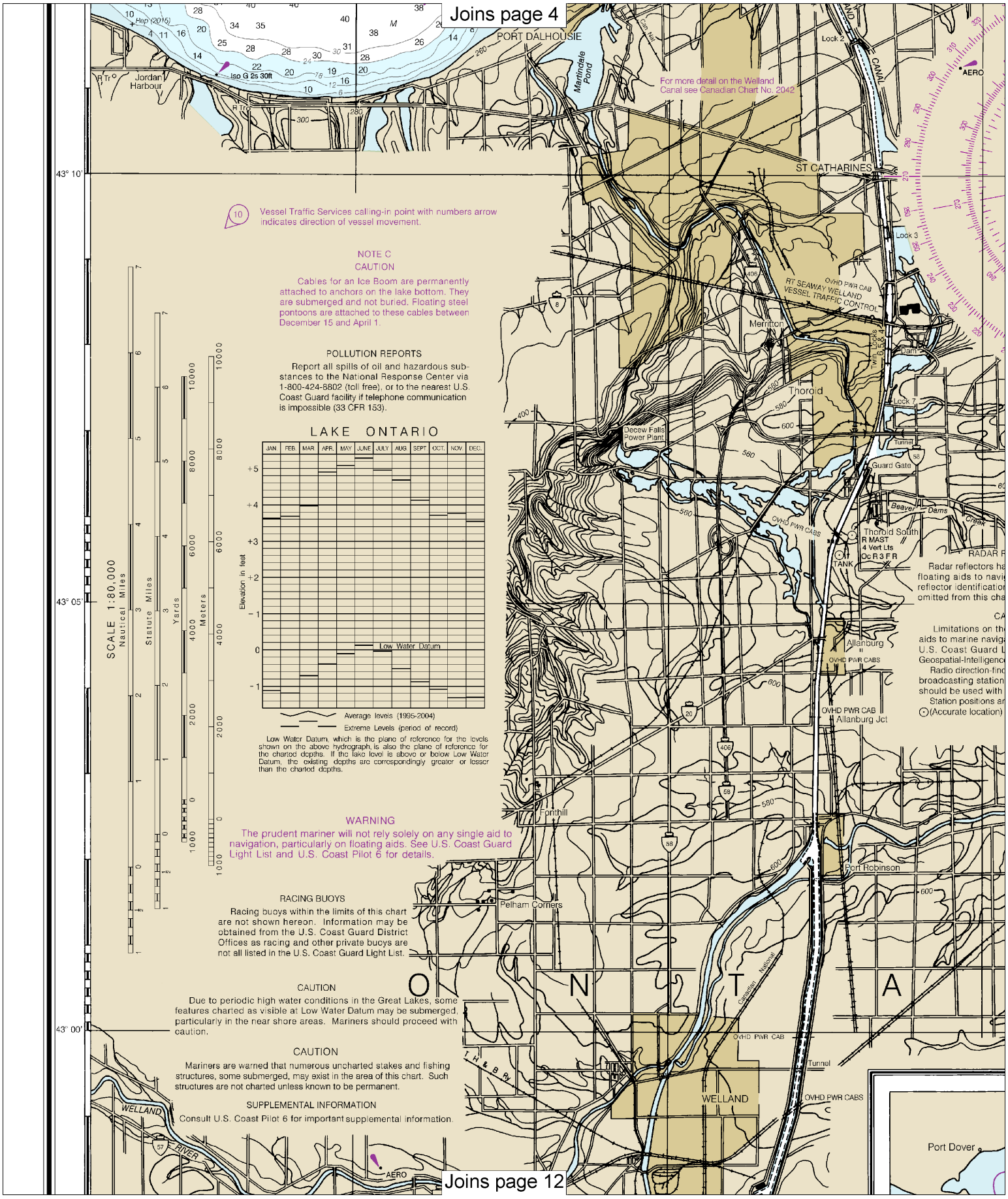
BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

AUTHORITIES. Hydrography and Topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers. Geological Survey, U.S. Coast Guard, and Canadian authorities.

NOTE A

gation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions isions to Chapter 2 are published in the Notices to Mariners.

Joins page 11



8

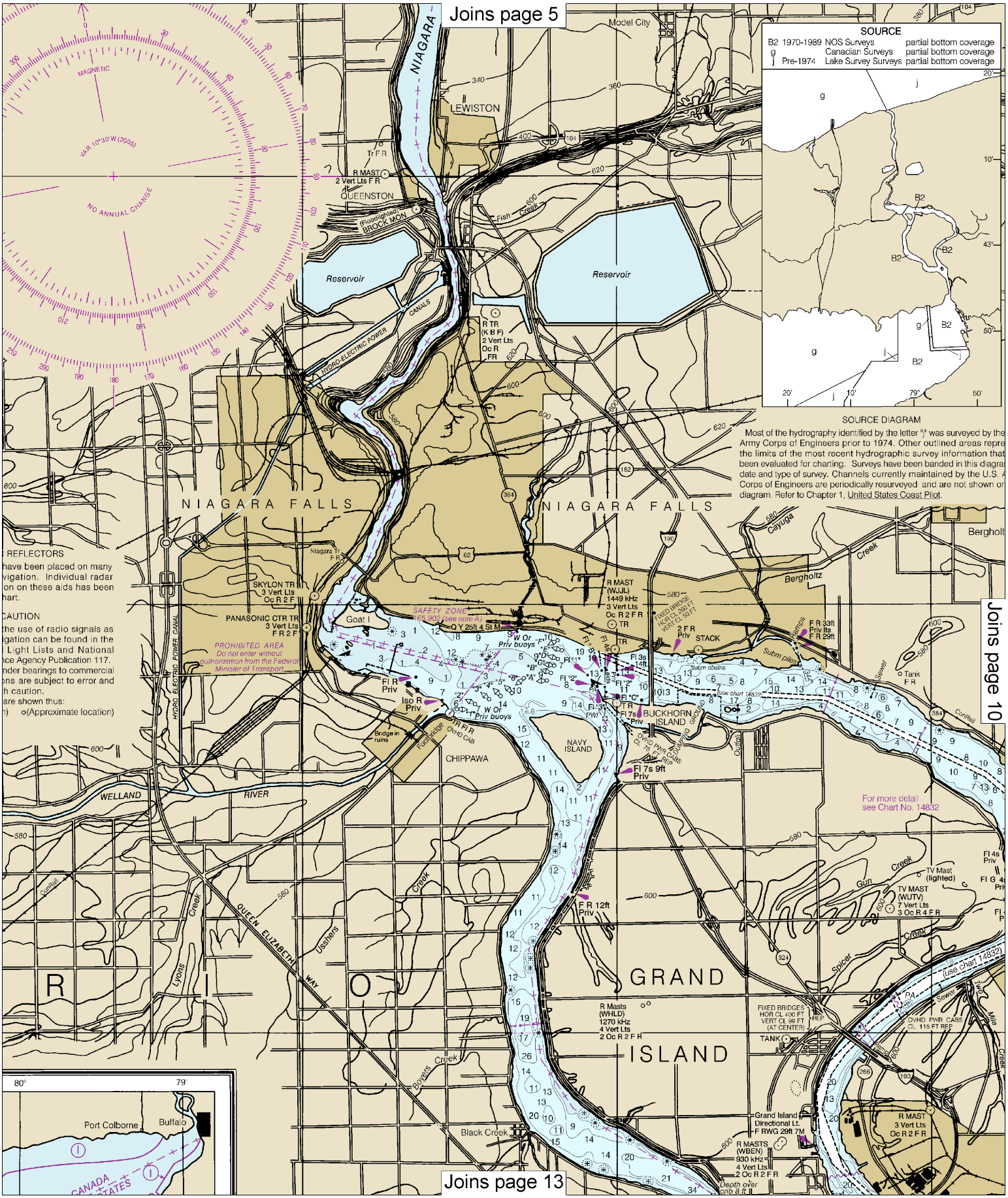
Note: Chart grid lines are aligned with true north.

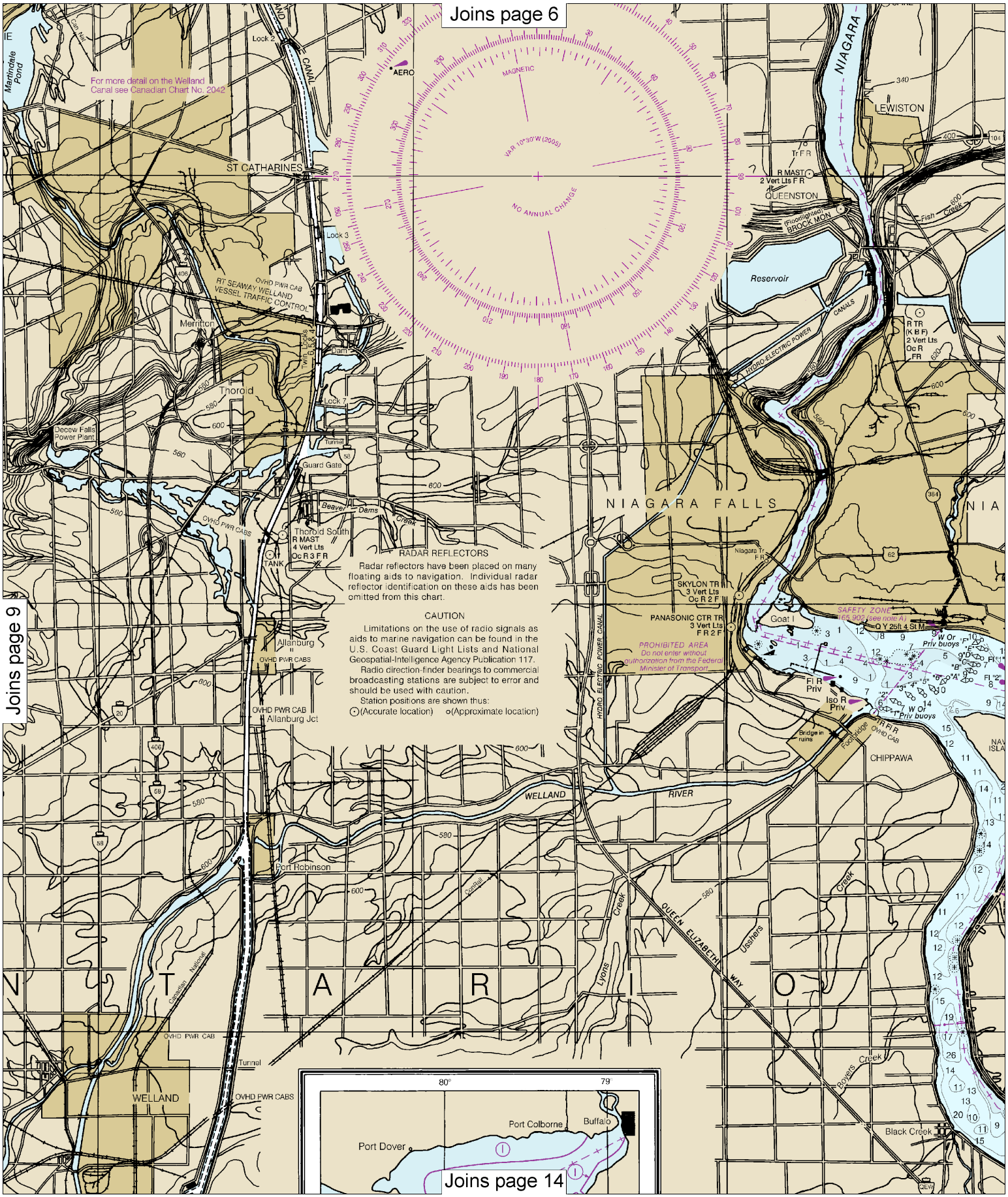
Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles: 1 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

See Note on page 5.


Joins page 5
Joins page 10
Joins page 13
NIAGARA
LEWISTON
Model City
QUEENSTON
BROCK MON
(Floodlighted)
Fish Creek
Reservoir
Reservoir
CANALS
HYDRO-ELECTRIC POWER
NIAGARA FALLS
NIAGARA FALLS
SOURCE
B2 1970-1989 NOS Surveys partial bottom coverage
g Canadian Surveys partial bottom coverage
j Pre-1974 Lake Survey Surveys partial bottom coverage
SOURCE DIAGRAM
Most of the hydrography identified by the letter "j" was surveyed by the
Army Corps of Engineers prior to 1974. Other outlined areas repre
the limits of the most recent hydrographic survey information that
been evaluated for charting. Surveys have been banded in this diagra
date and type of survey. Channels currently maintained by the U.S. A
Corps of Engineers are periodically resurveyed and are not shown or
diagram. Refer to Chapter 1, United States Coast Pilot.
REFLECTORS
have been placed on many
vigation. Individual radar
on on these aids has been
hart.
CAUTION
the use of radio signals as
igation can be found in the
Light Lists and National
ce Agency Publication 117.
nder bearings to commercial
ons are subject to error and
h caution.
are shown thus:
SKYLON TR
3 Vert Lts
Oc R 2 F
PANASONIC CTR TR
3 Vert Lts
F R 2 F
PROHIBITED AREA
Do not enter without
authorization from the Federal
Minister of Transport
SAFETY ZONE
(165.902 (see note A))
Goat I
HYDRO ELECTRIC POWER CANAL
Fl R
Priv
Iso R
Priv
Bridge in
ruins
FOOTBRIDGE
OVHD CAB
CHIPPAWA
WELLAND
RIVER
R MAST
(WJJL)
1449 kHz
3 Vert Lts
Oc R 2 F R
TR
2 F R
Priv
STACK
Fl 3s
14ft
Priv
Fl 7s 9ft
Priv
BUCKHORN
ISLAND
NAVY
ISLAND
F R 33ft
Priv lts
F R 29ft
Subm piles
Subm obstns
Tank
F R
Conrail
Cayuga
Creek
Bergholtz
Bergholt
For more detail
see Chart No. 14832
TV Mast
(lighted)
TV MAST
(WUTV)
7 Vert Lts
3 Oc R 4 F R
Gun
Creek
Spicer
Creek
Mills
Creek
Ussher
Creek
Lyons
Creek
QUEEN ELIZABETH WAY
F R 12ft
Priv
R Masts
(WHLD)
1270 kHz
4 Vert Lts
2 Oc R 2 F R
GRAND
ISLAND
FIXED BRIDGES
HOR CL 400 FT
VERT CL 96 FT
(AT CENTER)
REP
OVHD PWR CABS
CL 115 FT REP
TANK
Grand Island
Directional Lt
F RWG 29ft 7M
R MASTS
(WBEN)
930 kHz
4 Vert Lts
2 Oc R 2 F R
R MAST
3 Vert Lts
Oc R 2 F R
Black Creek
Doyles Creek
Depth over
cnb 8 ft
Port Colborne
Buffalo
CANADA
STATES
80°
79°



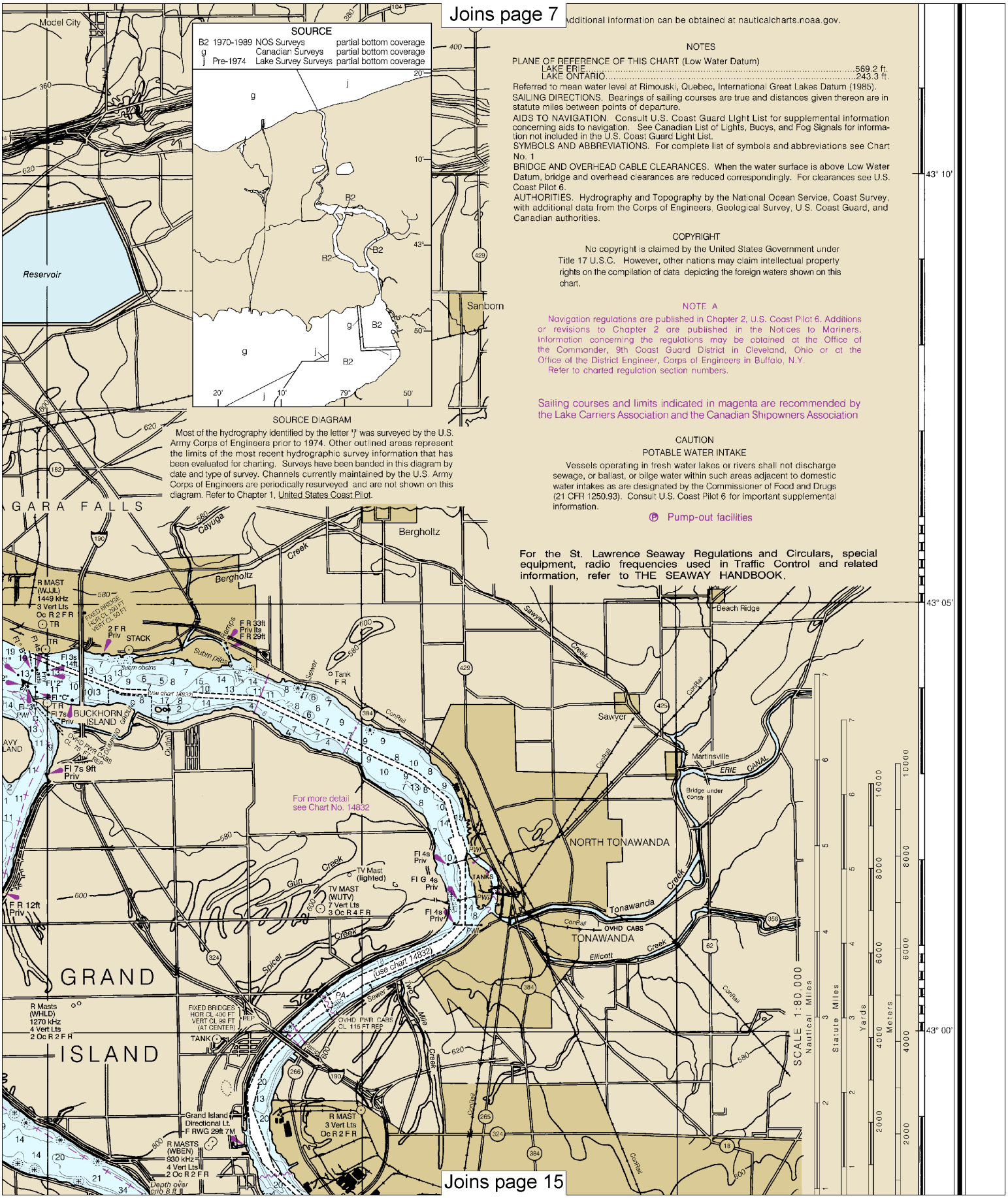
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:80,000~~

See Note on page 5.

Nautical Miles
1 0 1 2 3 4 5 6 7

Yards
1000 0 2000 4000 6000 8000 10000


Joins page 7
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SOURCE DIAGRAM
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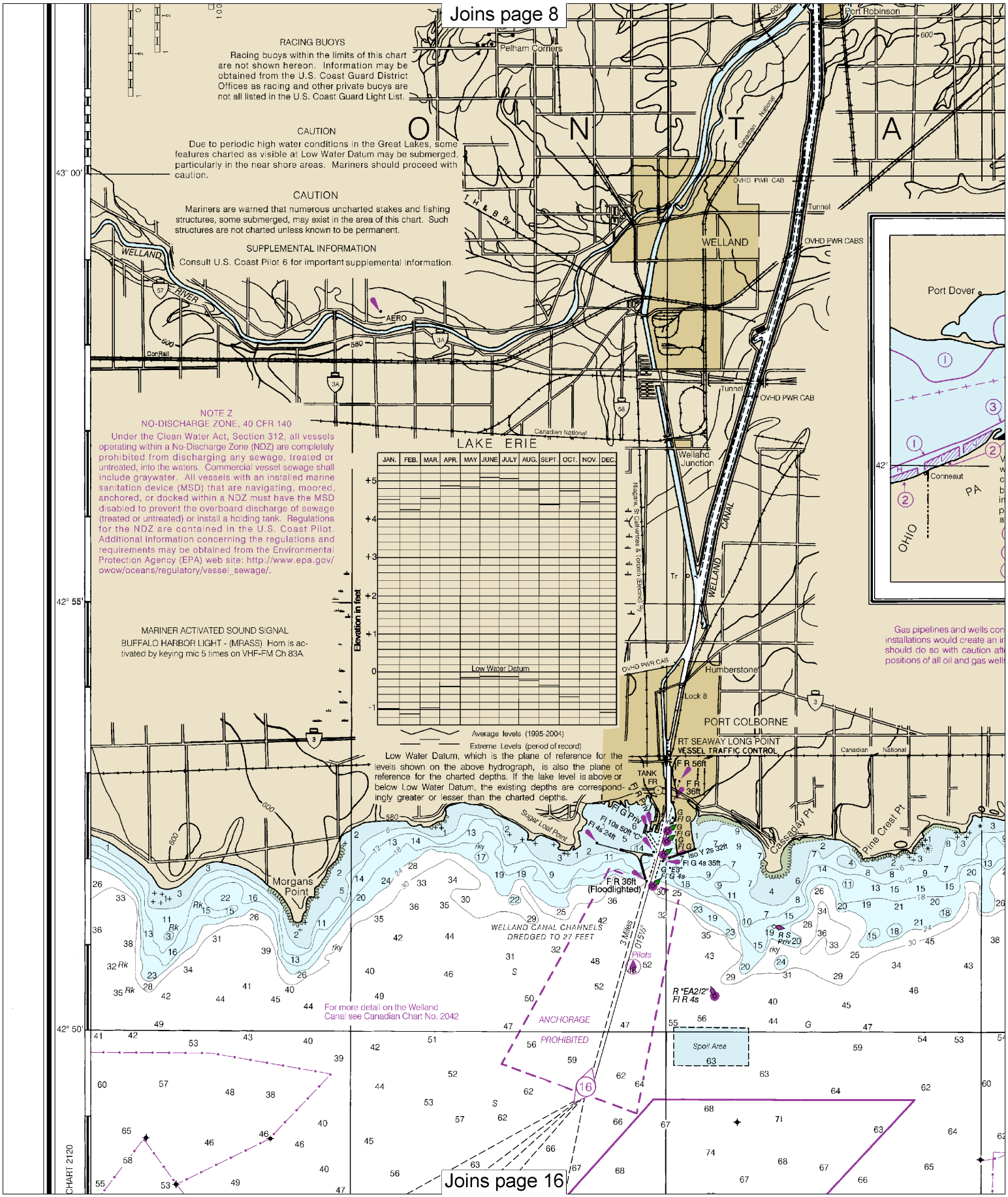
AUTHORITIES. Hydrography and Topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.
COPYRIGHT
No copyright is claimed by the United States Government under Title 17 U.S.C. However, other nations may claim intellectual property rights on the compilation of data depicting the foreign waters shown on this chart.
NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio or at the Office of the District Engineer, Corps of Engineers in Buffalo, N.Y.
Refer to charted regulation section numbers.
Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association
CAUTION
POTABLE WATER INTAKE
Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 6 for important supplemental information.
Pump-out facilities
For the St. Lawrence Seaway Regulations and Circulars, special equipment, radio frequencies used in Traffic Control and related information, refer to THE SEAWAY HANDBOOK.
Model City
Reservoir
Sanborn
Bergholtz
Creek
Cayuga
Beach Ridge
Sawyer
Creek
Martinsville
ERIE CANAL
Bridge under constr
NORTH TONAWANDA
TONAWANDA
Tonawanda Creek
Gun Creek
Spicer Creek
Ellicott Creek
Mile Creek
ConRail
OVHD CABS
TANKS
BUCKHORN ISLAND
GRAND ISLAND
R MAST (WJJL) 1449 kHz 3 Vert Lts Oc R 2 F R
2 F R Priv STACK
F R 33ft Priv lts F R 25ft
Fl 3s 14ft
Fl 7s 9ft Priv
F R 12ft Priv
Fl 4s Priv
Fl G 4s Priv
TV Mast (lighted)
TV MAST (WUTV) 7 Vert Lts 3 Oc R 4 F R
R Masts (WHLD) 1270 kHz 4 Vert Lts 2 Oc R 2 F R
FIXED BRIDGES HOR CL 400 FT VERT CL 98 FT (AT CENTER)
OVHD PWR CABS CL 115 FT REF
Grand Island Directional Lt. F RWG 29ft 7M
R MAST 3 Vert Lts Oc R 2 F R
R MASTS (WBEN) 930 kHz 4 Vert Lts 2 Oc R 2 F R
For more detail see Chart No. 14832
(use chart 14832)
SCALE 1:80,000
Nautical Miles
Statute Miles
Yards
Meters
43° 10'
43° 05'
43° 00'
Joins page 15



Note: Chart grid lines are aligned with true north.

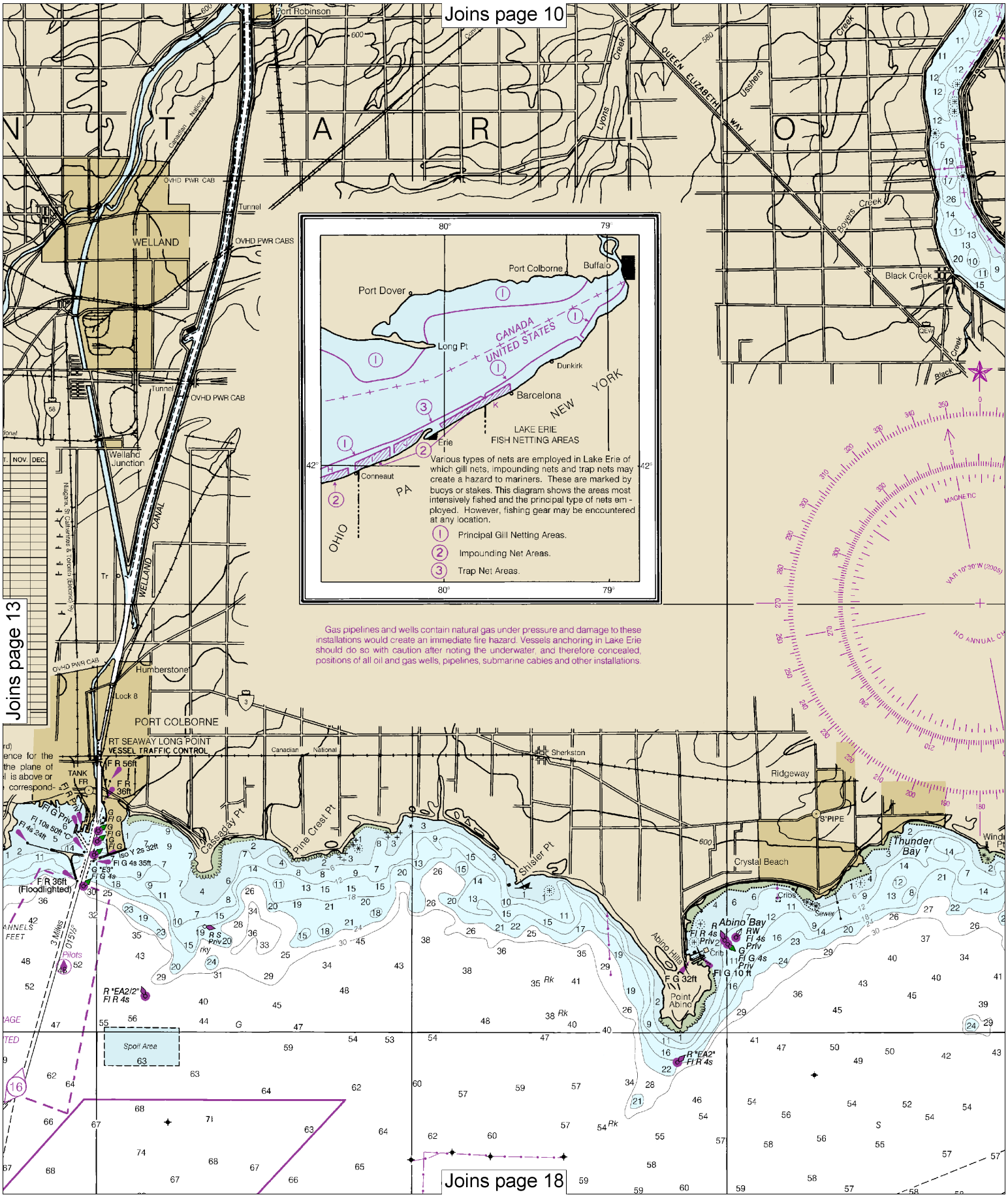
Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles
1 0 1 2 3 4 5 6 7

Yards
1000 0 2000 4000 6000 8000 10000

See Note on page 5.


Joins page 9
GRAND
ISLAND
R I O
QUEEN ELIZABETH WAY
Black Creek
Boyers Creek
Spicer Creek
Usshers Creek
Lyons Creek
Gun Creek
Frenchman Creek
Black Creek
R Masts (WHLD) 1270 kHz 4 Vert Lts 2 Oc R 2 F R
TV Mast (lighted)
TV MAST (WUTV) 7 Vert Lts 3 Oc R 4 F R
F R 12ft Priv
FIXED BRIDGES HOR CL 400 FT VERT CL 96 FT (AT CENTER)
OVHD PWR CABS CL 115 FT REP
Grand Island Directional Lt. F RWG 29ft 7M
R MASTS (WBEN) 930 kHz 4 Vert Lts 2 Oc R 2 F R
R MAST 3 Vert Lts Oc R 2 F R
Beaver Island State Park
Depth over crib 6 ft
Fl G 1' Priv
F R '2' Priv
Obstn rep
Obstn
Trc (strobe)
F R 48ft
F R 25ft
F R 27ft
F R 86ft
Q Stack
Ramp
Hoist
FIXED BRIDGE HOR CLE DRAW 154 FT HOR CL W DRAW 156 FT VERT CL 22 FT
Customs
TANK
FORT ERIE
OVHD PWR CAB CL 126 FT REP
12 R MASTS (CJRN) 2 Vert Lts Oc R FR 710 kHz
Ft Erie
Joins page 14
Sherkston
Ridgeway
S'PIPE
Shisler Pt
Crystal Beach
Thunder Bay
Windmill Pt
Bertie Bay
Waverly Shoal
Abino Bay
Fl R 4s RW Priv
Fl G 4s Priv
Abino Hills
F G 32ft
Fl G 10 ft
Point Abino
R "EA2" Fl R 4s
ABAND LT HQ
BUFFALO HARBOR LT
HORN (MRASS)
Joins page 17
Port Colborne
Buffalo
CANADA
UNITED STATES
Long Pt
Dunkirk
Barcelona
YORK
NEW
Erie
LAKE ERIE
FISH NETTING AREAS
Various types of nets are employed in Lake Erie of which gill nets, impounding nets and trap nets may create a hazard to mariners. These are marked by buoys or stakes. This diagram shows the areas most intensively fished and the principal type of nets em - ployed. However, fishing gear may be encountered at any location.
1 Principal Gill Netting Areas.
2 Impounding Net Areas.
3 Trap Net Areas.
ontain natural gas under pressure and damage to these immediate fire hazard. Vessels anchoring in Lake Erie after noting the underwater, and therefore concealed, ells, pipelines, submarine cables and other installations.
MAGNETIC
VAR 10°30'W (2005)
NO ANNUAL CHANGE



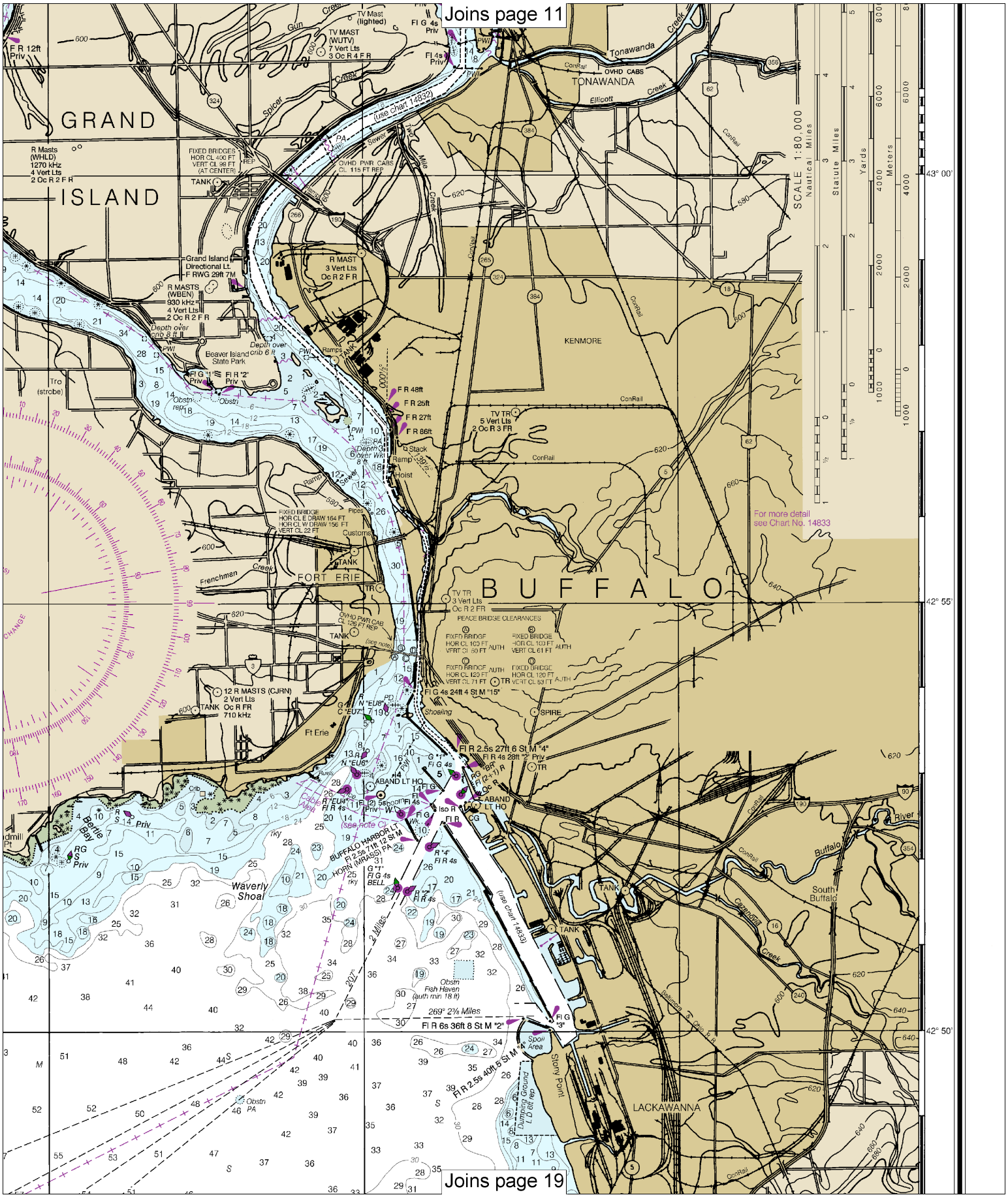
Note: Chart grid lines are aligned with true north.

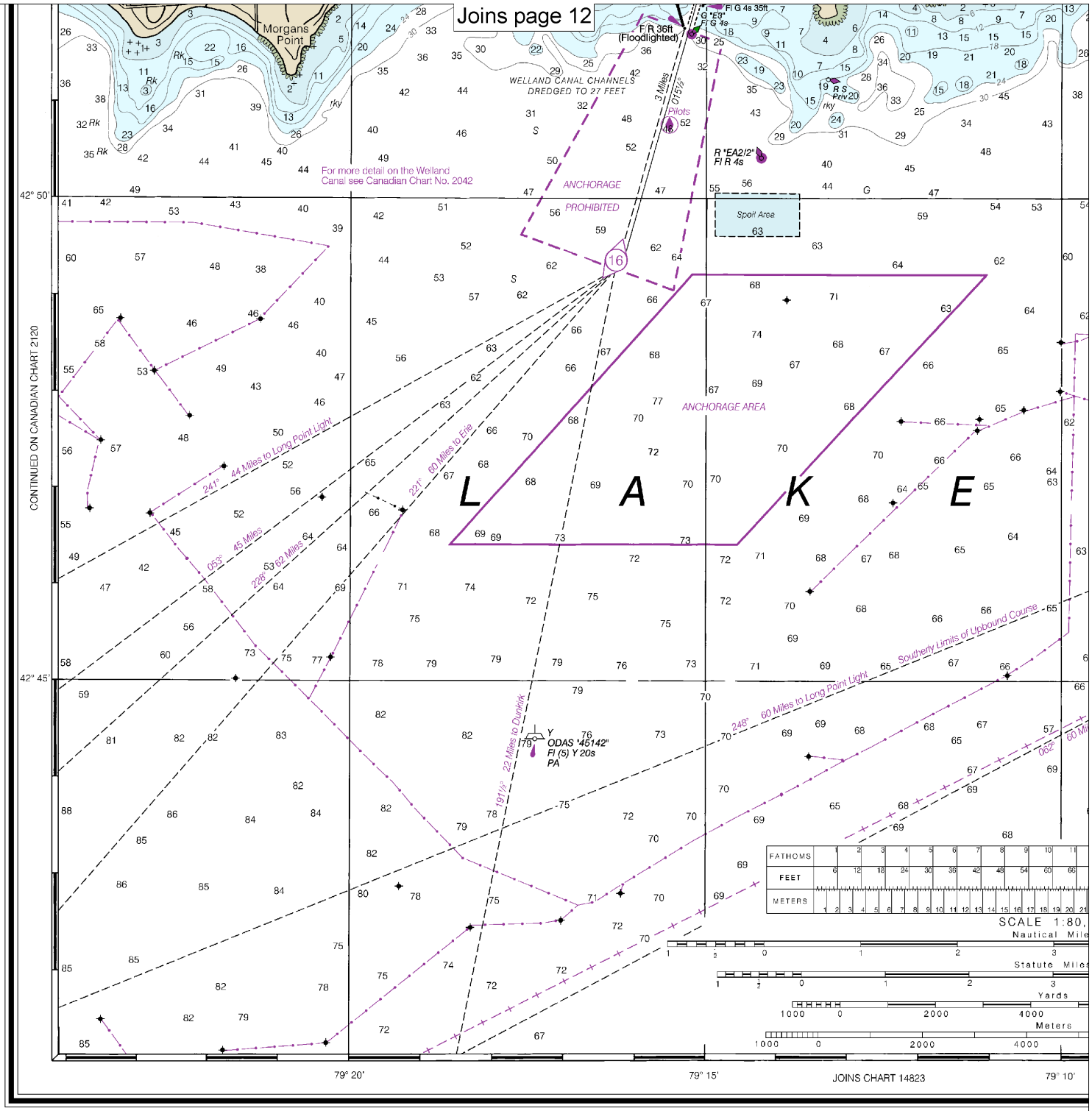
Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles: 1 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

See Note on page 5.


Joins page 11
GRAND ISLAND
TONAWANDA
KENMORE
BUFFALO
FORT ERIE
LACKAWANNA
South Buffalo
Waverly Shoal
Bertie Bay
Story Point
Spoil Area
Dumping Ground
Grand Island Directional Lt. F RWG 29ft 7M
R MASTS (WBEN) 930 kHz 4 Vert Lts 2 Oc R 2 F R
R Masts (WHLD) 1270 kHz 4 Vert Lts 2 Oc R 2 F R
R MAST 3 Vert Lts Oc R 2 F R
TV MAST (WUTV) 7 Vert Lts 3 Oc R 4 F R
TV Mast (lighted)
TV TR 5 Vert Lts 2 Oc R 3 FR
TV TR 3 Vert Lts Oc R 2 FR
12 R MASTS (CJRN) 2 Vert Lts TANK Oc R FR 710 kHz
Beaver Island State Park
Fl G 4s Priv
Fl 4s Priv
F R 48ft
F R 25ft
F R 27ft
F R 86ft
Fl G 4s 24ft 4 St M "15"
Fl R 2.5s 27ft 6 St M "4"
Fl R 4s 28ft "2" Priv
ABAND LT HO
Iso R 4s
Fl R 6s 36ft 8 St M "2"
Fl R 2.5s 40ft 5 St M
Fl G "3"
BUFFALO HARBOR LT Fl 2.5s 71ft 12 St M
HORN (MRASS) PA
Fl G 4s BELL
Obstn Fish Haven (auth min 18 ft)
269° 2¾ Miles
207°
2 Miles
(use chart 14832)
(use chart 14833)
For more detail see Chart No. 14833
SCALE 1:80,000
Nautical Miles
Statute Miles
Yards
Meters
43° 00'
42° 55'
42° 50'
Joins page 19



14822

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOUNDINGS IN

32nd Ed., Aug. 2005. Last Correction: 10/18/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 4916 (12/3/2016), CHS: 1116 (11/25/2016)

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:80,000~~

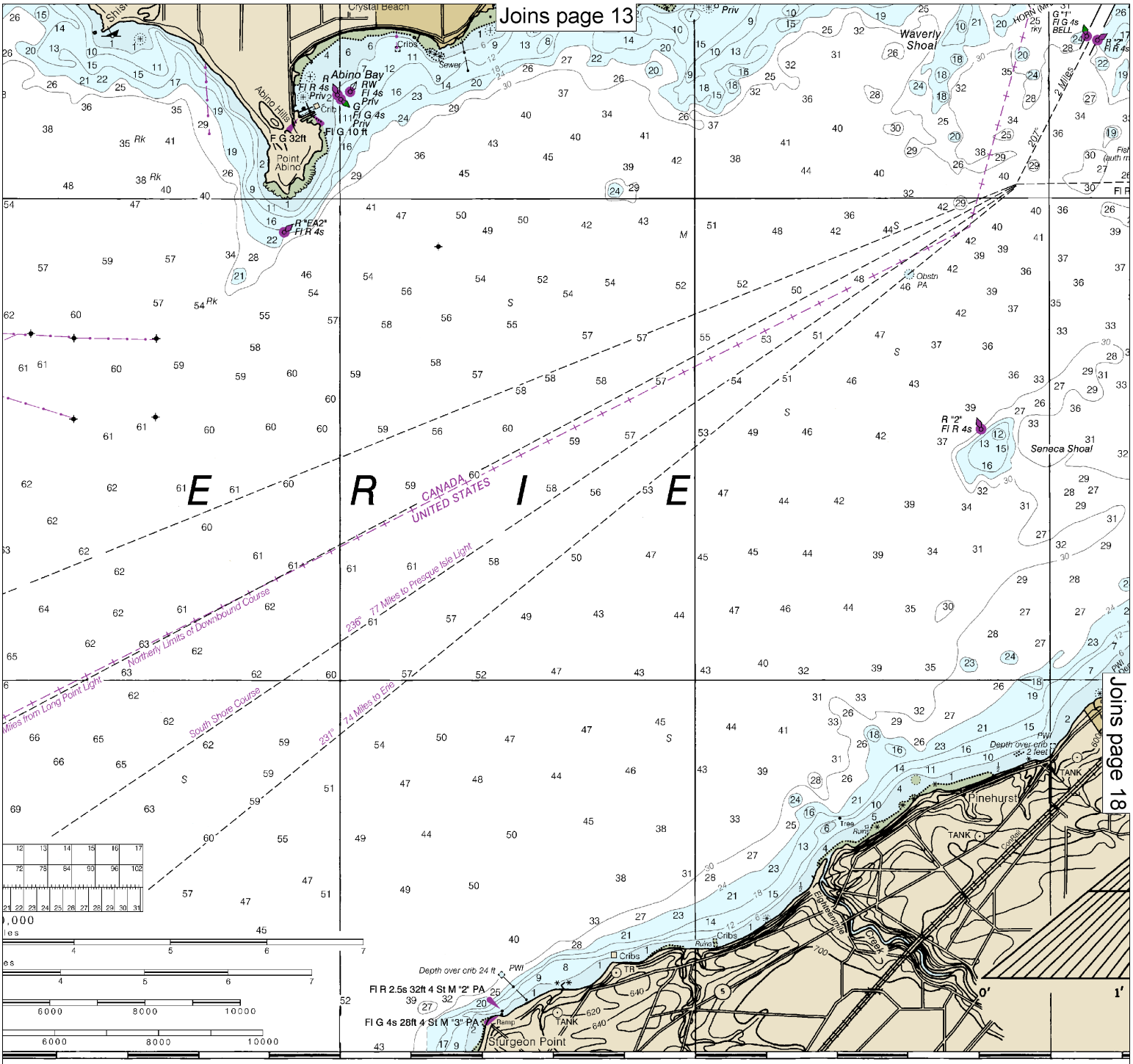
Nautical Miles

1 0 1 2 3 4 5 6 7

Yards

1000 0 2000 4000 6000 8000 10000

See Note on page 5.



N FEET

Published at Washington, D.C.
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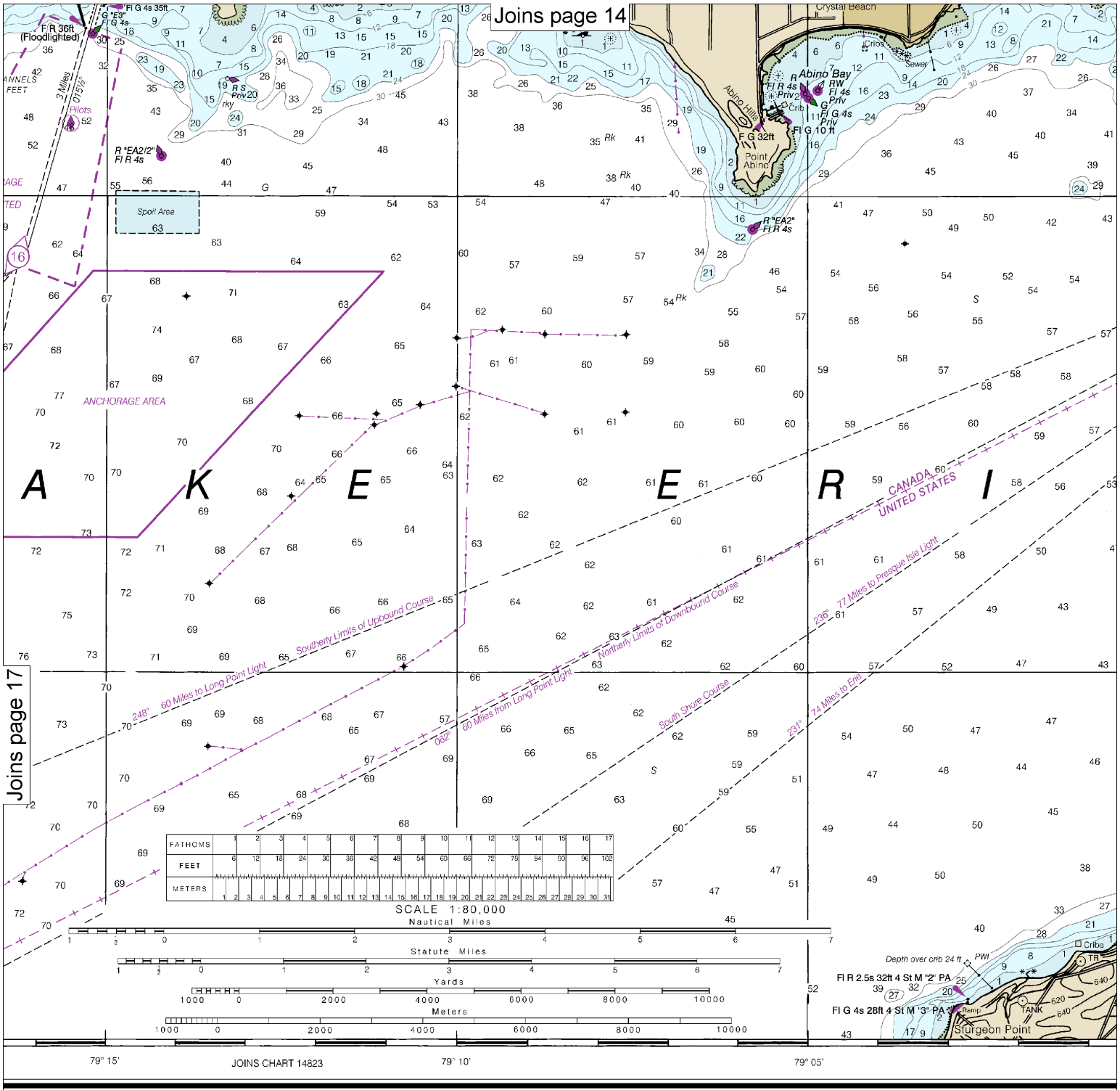
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY



SOUNDINGS IN FEET

Published at Washington, D.C.
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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

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1/25/2016)

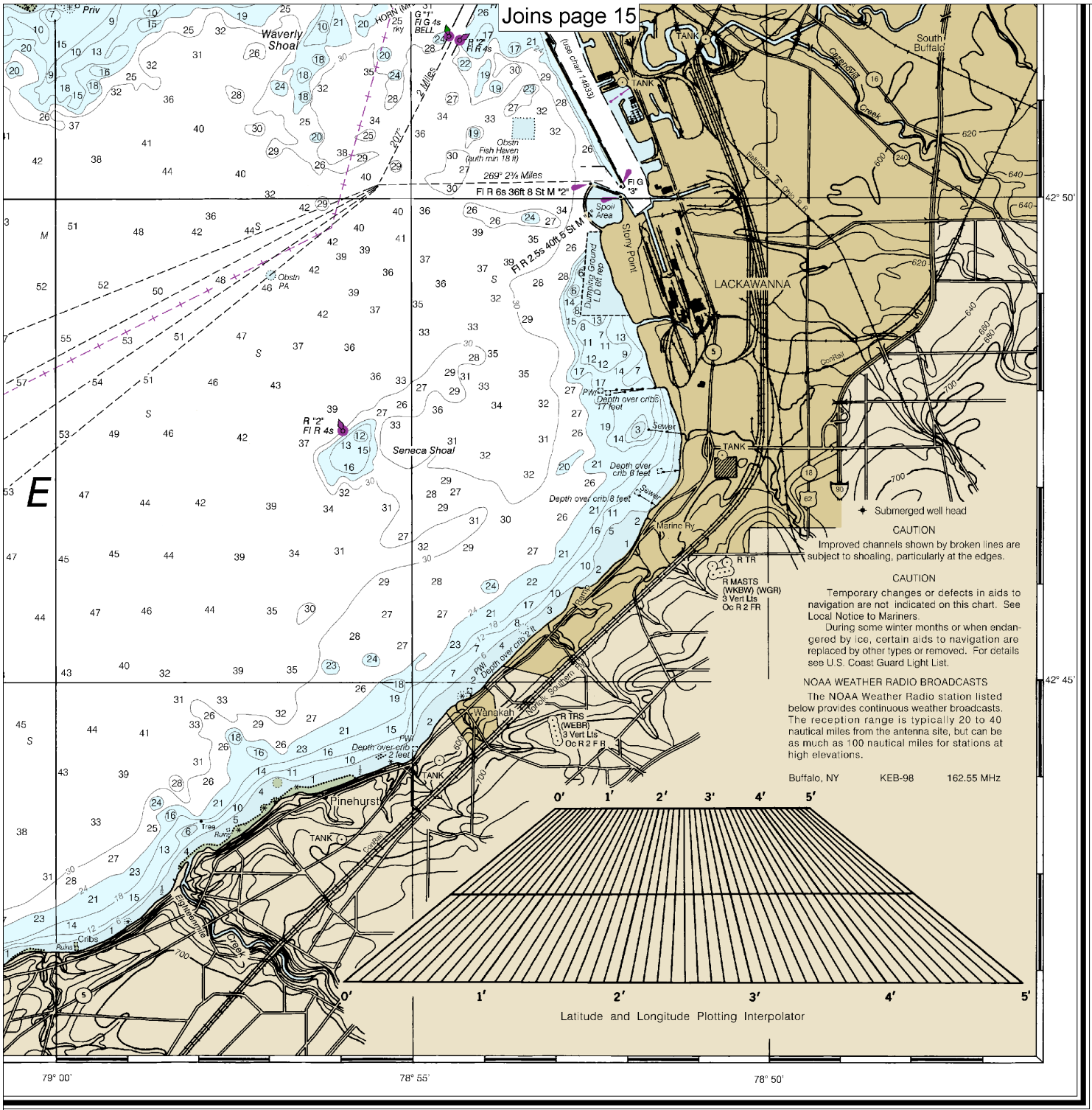
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles: 1 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

See Note on page 5.



Niagara River and Welland Canal

SOUNDINGS IN FEET - SCALE 1:80,000

14822

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
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Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
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Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

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